An illustrated and annotated checklist of *Arhopala* Boisduval, 1832, taxa occurring in North Maluku and Maluku, Indonesia (Lepidoptera: Lycaenidae) — Part 2: The *democritus* and *eumolphus* species-groups

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Abstract: This paper is the 2nd in the series covering the species and subspecies of the lycaenid genus *Arhopala* Boisduval, 1832 that occur in the Indonesian provinces of North Maluku and Maluku and deals with the *democritus* and *eumolphus* species-groups, *sensu* Evans (1957). Eight described taxa (6 species) in the *democritus* species-group and 14 taxa (9 species) in the *eumolphus* species-group are recognised as occurring there. Two new subspecies are described from Halmahera — *Arhopala cleander* ***scoreyorum*** **ssp. n.** (holotype = HT male, NHMUK) (*cleander* subgroup of the *democritus* species-group); *Arhopala irma* ***kotaroi*** **ssp. n.** (HT male, The Research Institute of Evolutionary Biology, Tokyo) (*wildei* subgroup of the *eumolphus* species-group) — and one from Taliabu: *Arhopala tephlis* ***mulleri*** **ssp. n.** (HT male, Australian Museum, Sydney) (*acetes* subgroup of the *eumolphus* species-group). We formally **designate a lectotype male** of *Arhopala phaenops buruensis* Holland, 1900 in the Carnegie Museum of Natural History, Pittsburgh. Some new island locality records are introduced, a map shows the islands discussed in the text and all taxa are illustrated in colour.

Keywords: Lepidoptera, Lycaenidae, Theclinae, *Arhopala*, *democritus* species-group, *eumolphus* species-group, new subspecies, new locality records, Indonesia, North Maluku, Maluku.

Illustriertes und kommentiertes Verzeichnis der *Arhopala*-Arten, die in den Nordmolukken und Molukken (Indonesien) vorkommen — Teil 2: Artengruppen von *democritus* und *eumolphus*

Zusammenfassung: Dies ist die zweite Publikation einer Serie über die Arten und Unterarten der Lycaenidengattung *Arhopala* Boisduval, 1832 aus den indonesischen Provinzen Nordmaluku und Maluku. Sie befaßt sich mit den Artengruppen von *Arhopala democritus* und *eumolphus sensu* Evans (1957). Acht beschriebene Taxa (mit 6 anerkannten Arten) der *democritus*-Artengruppe sowie 14 Taxa (9 Arten) der *eumolphus*-Artengruppe sind von dort bekannt. Zwei neue Unterarten werden von Halmahera beschrieben: *Arhopala cleander* ***scoreyorum*** **ssp. n.** (Holotypus = HT Männchen, NHMUK) (aus der *cleander*-Untergruppe der *democritus*-Artengruppe); *Arhopala irma* ***kotaroi*** **ssp. n.** (HT Männchen, im Research Institute of Evolutionary Biology, Tokio) (*wildei*-Untergruppe der *eumolphus*-Artengruppe); weiter eine neue Unterart von Taliabu: *Arhopala tephlis* ***mulleri*** **ssp. n.** (HT Männchen, Australian Museum, Sydney) (*acetes*-Untergruppe der *eumolphus*-Artengruppe). Wir **designieren einen männlichen Lectotypus** von *Arhopala phaenops buruensis* Holland, 1900, im Carnegie Museum of Natural History, Pittsburgh. Einige neue Inselnachweise werden gegeben, eine Karte zeigt die besprochenen Inseln, und alle Taxa werden farbig illustriert.

Introduction

***Arhopala* Boisduval, 1832** (Lycaenidae, Theclinae, Arhopalini) is the 5th genus to be published in NEVA in the series on the lycaenid genera of the Indonesian provinces of North Maluku (Maluku Utara) and Maluku. As this is a large group we have split the genus into sections for publication. In the first part (Rawlins et al. 2018) we covered the key works, the range and number of species of *Arhopala*, the evolution and currently accepted meaning of the name and its synonyms, as well as Evans' (1957) *anthelus* and *theba* species-groups.

This second part covers the *democritus* and *eumolphus* species-groups, *sensu* Evans (1957). We recognise eight taxa, comprising six species, in the *democritus* species-group and 14 taxa, comprising nine species, in the *eumolphus* species-group, as occurring in the Maluku area. We describe three new subspecies, designate one new lectotype and introduce some new locality records.

For the biogeography of the region see Rawlins et al. (2014: 5–8) but for the purposes of this paper we make the following key points:

- We use the term Maluku to include both the Indonesian political Provinces of North Maluku (= Maluku Utara) and Maluku.
- The province North Maluku comprises: the Sula islands, the islands we term "northern Maluku" (see below), Obi and Gebe.
- The province Maluku comprises: the islands we term "central Maluku" (see below), the Gorong, Watubela and Tayandu Island groups, the Banda Islands, the Kei Islands, the islands of Southwest Maluku (including Wetar), the Tanimbar Islands and the Aru Islands.
- We use the biogeographical term "northern Maluku" to mean the islands of Morotai, Halmahera, Ternate, Bacan, Kasiruta and Mandioli and some associated smaller islands.
- We use the biogeographical term "central Maluku" to mean the islands of Buru, Ambelau, Manipa, Kelang, Buano, Seram, Ambon, Haruku, Saparua, Nusa Laut, Geser and Seram Laut.

A map shows the islands of Maluku and North Maluku. Here we note that the Indonesian western half of the Island of New Guinea along with its associated offshore islands (previously variously known as Irian, Irian Jaya, West Irian, Irian Barat) now consists of two political provinces: West Papua and Papua. We use the term "New Guinea" in its geographical sense to mean the whole island including these two Indonesian Provinces along with the mainland part of the country of Papua New Guinea.

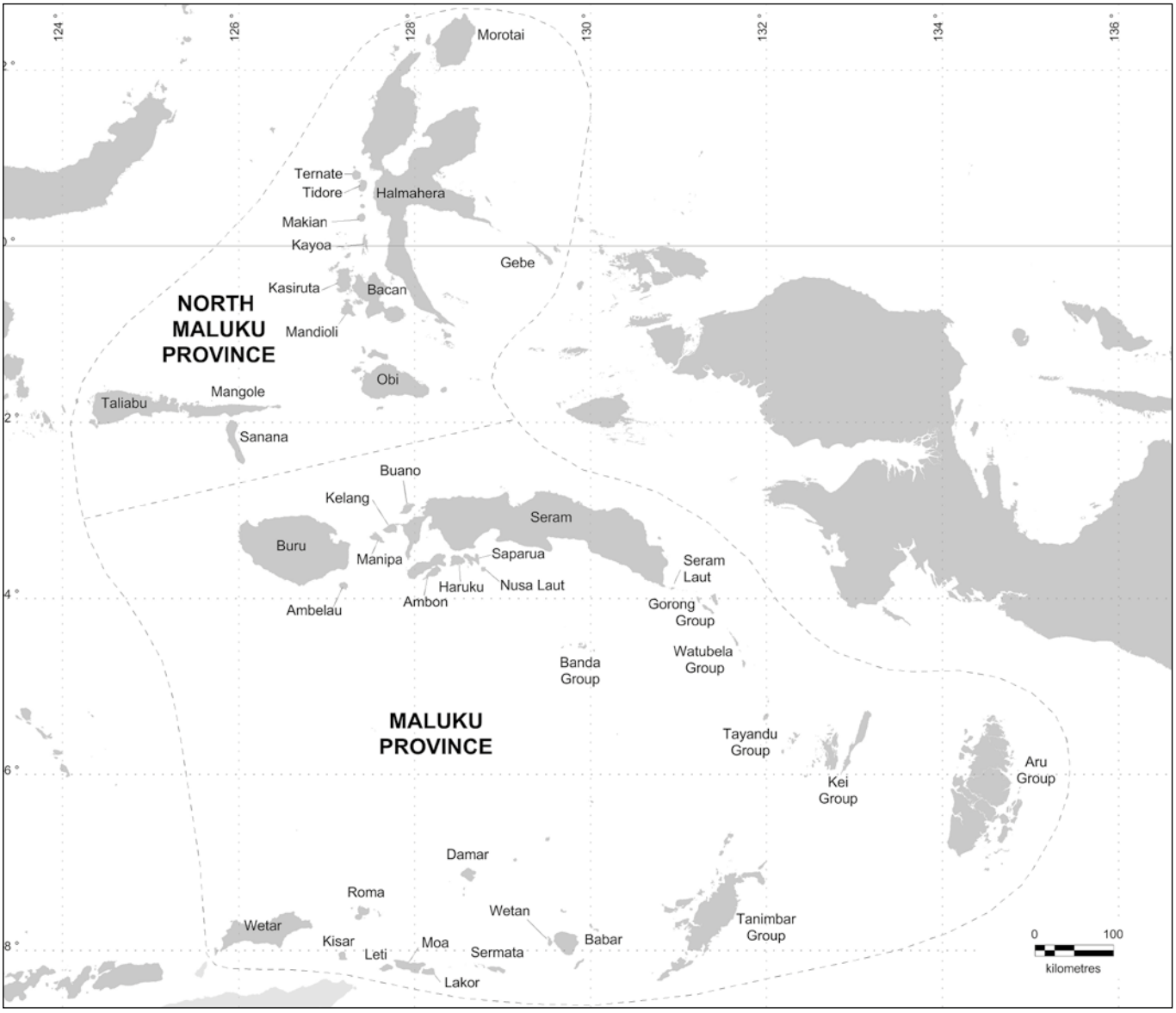
Where available, both surfaces of both sexes of each taxon are illustrated. To reduce the number of plates needed,

most specimens are illustrated "halved", showing the upperside on the left and the underside on the right. In most cases we have depicted the left half of the butterfly, but where the right side is in significantly better condition, we have shown this and flipped the image to allow easier comparison of similar taxa.

We have examined the collections of the Natural History Museum, London, and examined specimens and photographs from some private collections.

Abbreviations used

AT	Allotype (no special status now, according to IUCN rules).
CARR	Coll. Andrew Rawlins, Rainham, Kent, UK.
CMNH	Carnegie Museum of Natural History, Pittsburgh.
CSSK	Coll. Stefan Schröder, Köln, Germany.
coll.	collection.
Fw(s)	forewing(s).
FwL	Forewing length.
HT	Holotype.
Hw	hindwing.
LT	Lectotype.
NHMUK	The Natural History Museum, London, UK.
NNML	Nationaal Natuurhistorisch Museum Naturalis (formerly Rijksmuseum van Natuurlijke Historie, RMNH), Leiden, Holland, and now part of the Naturalis Biodiversity Center.
PLT	Paralectotype.
PNG	The country of Papua New Guinea.
PT	Paratype.
SMT	Senckenberg Museum für Tierkunde, Dresden.
ssp. n.	Subspecies nova.
TL	Type locality.
ZSM	Zoologische Staatssammlung München (Munich), Germany.



Map: Provinces of North Maluku and Maluku showing the island names used in the text.

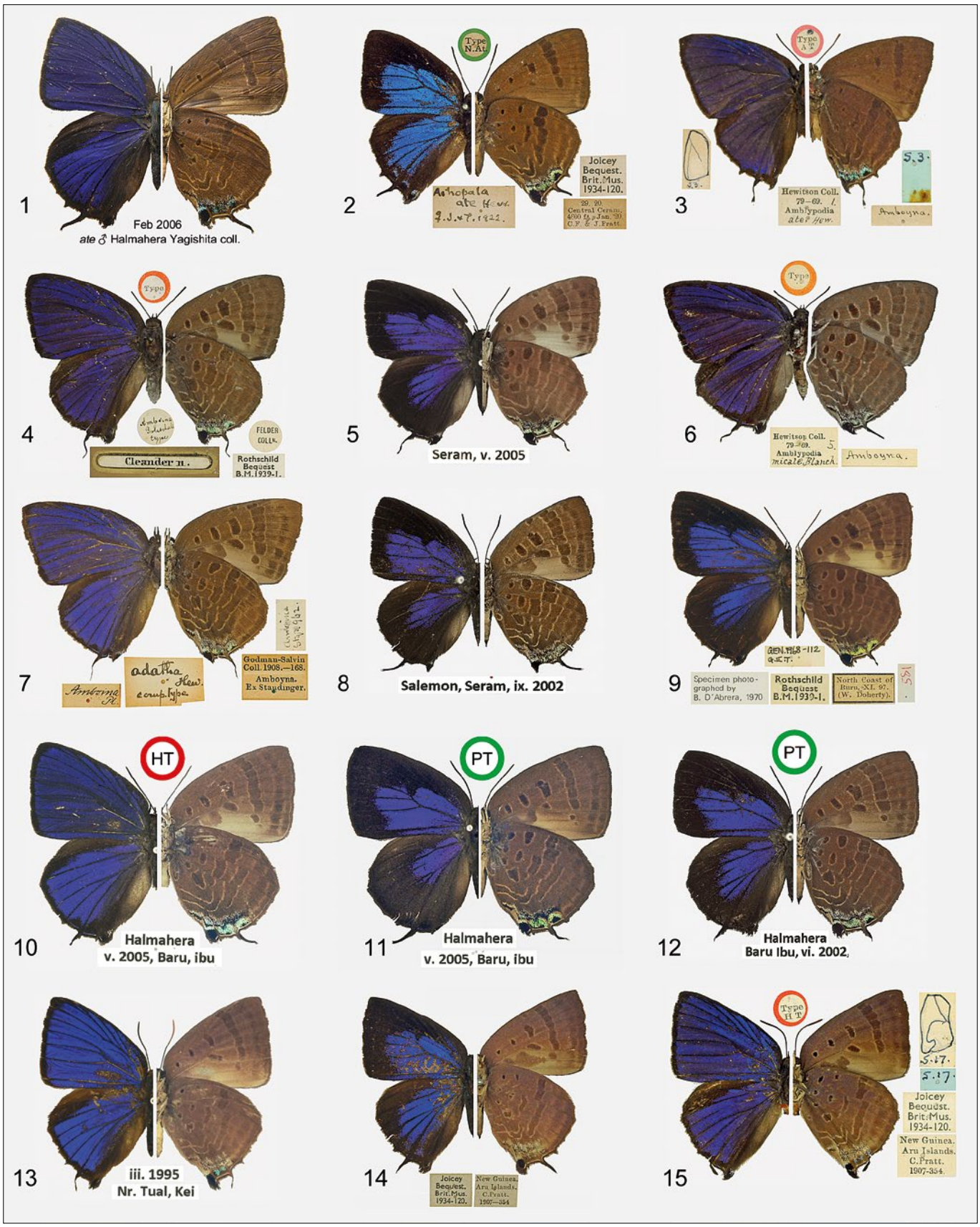


Plate 1, Figs. 1–15: *democritus* species-group, *cleander* subgroup. — **Figs. 1–3:** ***Arhopala ate:*** **1:** ♂, ups./uns., Halmahera (II. 2006, coll. YAGISHITA). **2:** ♀, ups./uns., Seram (Central Ceram, 4600 ft., Jan. [19]20, C. F. & J. PRATT, NHMUK). **3:** ♂, type, ups./uns., Ambon (Amboyna, HEWITSON Coll., NHMUK).— **Figs. 4–12:** Subspecies of ***Arhopala cleander*. Figs. 4–9:** *A. cleander cleander:* **4:** ♂, type, ups./uns., Ambon (Amboina, DOLESCHALL type, FELDER Colln., NHMUK). **5:** ♀, ups./uns., Seram (v. 2005, CARR). **6:** ♂, ups./uns., Ambon (type *adatha* = *cleander*, Amboyna, HEWITSON Coll., NHMUK). **7:** ♂, ups./uns., Ambon (Amboina, PL[ATEN], *adatha*, HEW[ITSON], comp. type, NHMUK). **8:** ♀, ups./uns., Seram (Salemon, IX. 2002, CARR). **9:** ♀, ups./uns., Buru (North Coast of Buru, XI. [18]97, W. DOHERTY, NHMUK). **Figs. 10–12:** *A. cleander* ***scoreyorum* ssp. n.**, Baru, Ibu, Halmahera: **10:** ♂, HT, ups./uns., (v. 2005, NHMUK). **11:** ♀, PT, ups./uns., (v. 2005, CARR). **12:** ♀, PT, ups./uns., (VI. 2002, CARR). — **Figs. 13–15:** ***Arhopala aruana:*** **13:** ♂, ups./uns., Kei (nr. Tual, Kei, III. 1995, CARR). **14:** ♀, ups./uns., Aru (New Guinea, Aru Islands, C. PRATT, 1907, NHMUK). **15:** ♂, HT, ups./uns., Aru (New Guinea, Aru Islands, C. PRATT, 1907, NHMUK). — For all plates: NHMUK specimen photographs are © Trustees of the Natural History Museum London, reproduced with permission.

Arhopala Boisduval, 1832

Type species: *phryxus* Boisduval, 1832 – designated by Scudder (1875: 120).

Annotated checklist of the *Arhopala democritus* species-group taxa of North Maluku and Maluku

Evans (1957: 101–107) divided his *democritus* species-group into three subgroups – *cleander*, *atrax* and *democritus* – with a total of 28 species. All three subgroups are represented in Maluku. We note that Evans placed this species-group under the genus *Narathura* Moore, 1879, but this genus is now considered a synonym of *Arhopala* as discussed in *Arhopala* part 1 (Rawlins et al. 2018).

Eliot (1972: 3–15) revised the *Arhopala cleander* group and subdivided this initially into two subgroups: *cleander* and *alea*. As the last sentence at the end of his paper (p. 15) he stated: "On reflection I consider that *A. agaba* should be incorporated into the *cleander* group as a third, monophyletic subgroup." Eliot's *cleander* subgroup largely corresponds with that of Evans (1957), but Eliot excluded *Arhopala quercoides* and he moved *Arhopala ate* from Evans' *hercules* species-group to the *cleander* subgroup. Parsons (1998: 383) included *A. ate* in the *cleander* subgroup of Evans' *democritus* species-group and we follow that arrangement.

The *cleander* subgroup of the *democritus* species-group

Evans (1957: 101–102) included six species in his *cleander* subgroup. As noted above, Eliot (1972: 11) transferred *Arhopala ate* into the *cleander* subgroup but excluded *Arhopala quercoides,* instead placing it in his *alea* subgroup (of *cleander*). Parsons (1998: 384) raised the status of *Arhopala cleander aruana* Evans, 1957 to a full species within the *cleander* subgroup.

Four species, including *Arhopala ate,* occur in Maluku.

Arhopala ate (Hewitson, 1863)

(Fig. 1: ♂, Halmahera; Fig. 2: ♀, Seram; Fig. 3: ♂ type *ate*, Ambon.)

Amblypodia ate: Hewitson (1863: 8, pl. 1, fig. 4); TL: Ambon – see note 1.

Range: Ambon, Seram (NHMUK). **New records:** Kelang (34 ♂♂ & 10 ♀♀, xi. 2017, Acho Bugis, pers. comm.); Halmahera (1 ♂, ii. 2006, coll. Yagishita).

Note 1: Hewitson (1863) briefly described the *ate* ♂ and illustrated its underside. He did not specify the number of specimens but noted from "Amboyna" and in the collection of A. R. Wallace. He added that it was probably only a variety of *A. adatha* Hewitson, 1862 (= *cleander*).

Bethune-Baker (1903a: 29) recorded that the only specimens known to him were Hewitson's type and a specimen in Staudinger's collection from Seram, suggesting there was only 1 in the original type series. Evans (1957: 100) noted that the ♂ "type" from "Amboina" was in the NHMUK. There is a ♂ bearing a red "Type AT" label in the NHMUK (Fig. 3). As Hewitson only described the ♂, there could not have been a ♂ AT. This specimen also bears "Amboyna" and "Hewitson Coll." labels and though it could be a ST is likely to be the HT.

Note 2: Joicey & Talbot (1922: 356) described the ♀ from 1 specimen from Seram. The NHMUK also holds a ♀ with providence and labels that match the description by Joicey & Talbot (although in the description they state the altitude as 4000 ft. but the label says 4600 ft.). This specimen (Fig. 2) bears a "Ne-Allotype" label, but we note that this has no current taxonomic significance, merely historical interest.

Note 3: Bethune-Baker (1903a: 29) also gave a description only of the ♂ and stated it had no close affinity with *A. adatha* but was like a miniature *hercules* Hewitson, 1862.

Note 4: Evans (1957: 100) placed *ate* in the *hercules* species-group but as noted above Eliot (1972: 11) transferred *ate* into the *cleander* subgroup.

Note 5: As noted above, Bethune-Baker (1903a: 29) reported that the only specimens known to him were Hewitson's type and a specimen from Seram. Evans (1957: 100) recorded that the NHMUK held only the "type", 2 further ♂♂ from Ambon and a pair from Seram. A ♂ from Halmahera in northern Maluku in coll. Yagishita (Fig. 1) represents the first record of *A. ate* outside central Maluku.

Arhopala cleander (C. Felder, 1860)

Amblypodia cleander: C. Felder (1860: 453); TL: Ambon.

= *Amblypodia adatha:* Hewitson (1862: 7, pl. 4, figs. 29–31); TL: Ambon.

Range: Thailand, Laos, Vietnam (Inayoshi 2017), Burma, Malaysia, Borneo, Indonesia (Sumatra, Java, Lombok, Pulao Laut, Sulawesi, Salayar, Banggai [labelled Bangka], central Maluku, Biak, Numfor [labelled Mefor], Yapen), New Guinea (NHMUK), Philippines (subspecies *malayica:* Treadaway 1995 – see note 2). **New record:** Peleng (subspecies *sostrata,* 2 ♀♀, xi. 2015, CARR).

Note 1: Evans (1957: 101) listed 9 subspecies for *cleander* including 3 new subspecies: *jobina, minor* and *aruana*. Eliot (1972: 5–7) transferred *minor* to *Arhopala athada* and both *jobina* and *aruana* to *Arhopala ate*. Parsons (1998: 384) transferred *jobina* back to *cleander* noting "its facies confirm *jobina* belongs with *cleander*". He also raised the status of *aruana* to a full species, whilst maintaining it in the *cleander* subgroup.

Evans (1957: 102) and Eliot (1972: 6) treated *malayica* Bethune-Baker, 1903a as a subspecies of *silhetensis* Hewitson, 1862 but Treadaway (1995: 75) and Takanami & Seki (2017) both considered it to be a subspecies of *cleander* and we concur.

Three specimens from Halmahera represent a new subspecies of *cleander* which is described below. This and the nominotypical subspecies occur in Maluku.

Arhopala cleander cleander (C. Felder, 1860)

(Fig. 4: ♂ type *cleande*r, Ambon; Fig. 5: ♀, Seram; Fig. 6: ♂ type *adatha* = *cleander,* Ambon; Fig. 7: ♂, Ambon; Fig. 8: ♀, Seram; Fig. 9: ♀, Buru.)

Amblypodia cleander: C. Felder (1860: 453); TL: Ambon – see note 1.

= *Amblypodia adatha:* Hewitson (1862: 7, pl. 4, figs. 29–31); TL: Ambon – see note 2.

Range: endemic to central Maluku – Buru, Seram, Ambon (NHMUK).

Note 1: Felder (1860) described both sexes of *cleander* from Ambon in Latin. He noted that the specimens were in the Felder collection and Evans (1957: 101) stated that the ♂ "type" was in the NHMUK (Fig. 4).

Note 2: Hewitson (1862), underneath the heading "*Amblypodia micale*.", wrote "*Amblypodia Adatha,* Hewitson." He illustrated the ♂ and noted specimens from Ambon and Singapore in the NHMUK. He listed as synonyms "*Arhopala Micale,* Boisd. MS.", "*Amblypodia Micale,* Westw. In Doubl. & Hewits. Gen. Diur. Lep.

p. 478" and "*Amblypodia Cleander,* Felder, Lep. Amboin. Sitz. Akad. Wiss. Wien."

Hewitson (1863: 8) listed "*Amblypodia Adatha*" as number 28 of 99 *Amblypodia* species. This time he listed *Amblypodia cleander* as the only synonym, with *Amblypodia micale* as the next (29th) taxon. The taxon *cleander* pre-dates *adatha,* so the synonymy is reversed.

Evans (1957: 101) and Eliot (1972: 5) both listed *adatha* as a synonym of *cleander* without explanation. Evans stated that the *adatha* ♂ "type" was in the NHMUK (Fig. 6). We have examined this specimen and it clearly matches the *cleander* ♂ type.

Note 3: Distant (1885: 265, pl. 23, figs. 1–2) listed *Narathura adatha* in his publication "Rhopalocera Malayana", as he considered a pair of *Arhopala* from Malacca in Malaysia, matched Hewitson's *adatha* type specimen. He illustrated and gave a description of these specimens. Staudinger (1889: 125) considered Distant's specimens represented a distinct species — see below under *Arhopala athada*. Bethune-Baker (1903a: 70) likewise could not understand how Distant equated his specimens to Hewitson's *adatha* type, remarking: "they have no resemblance whatever, either in form, colour or markings".

Arhopala cleander scoreyorum ssp. n.

(Fig. 10: ♂ HT, Halmahera; Fig. 11: ♀ PT, Halmahera; Fig. 12: ♀ PT, Halmahera.)

Holotype ♂: Indonesia, Halmahera, Ibu, Baru, v. 2005 (NHMUK).

Paratypes (2 ♀♀): Halmahera, Ibu, Baru: 1 ♀, v. 2005; 1 ♀, vi. 2002 (CARR).

Etymology: named for the first author's lifelong friends Jeremy and Pippa Scorey.

Range: Halmahera.

Diagnosis and description

♂ (Fig. 10): FwL 26 mm.

Upperside: dark purple-blue as nominotypical, with narrow black borders, measuring 1.5 mm at fw apex. The outer part of hw space 6 black, space 7 predominantly black, only basally purple-blue. Spaces 1b and 2 at wing margin with a faint thin line of blue scales and triangle shaped, black indentations. A tail at vein 2. Tornal lobe well developed.

Underside: ground-colour earthy brown. The fw postdiscal band, narrow and not dislocated at vein 4 (compare nominotypical *cleander*). A costal spot in space 10. Hw postdiscal band completely dislocated at vein 2; the band in spaces 2 to 5 unbroken. The spot in space 6 slightly wider than spot in space 7. A black tornal spot in space 1a and tornal metallic green scales in spaces 1a–2 lined on their inner margin with silvery-greyish metallic scales.

♀ (Fig. 11): FwL 26 mm.

Upperside: bright purple-blue area on both wings strongly reduced. On the fw reaching over two thirds of the wing in spaces 1a–3. The fw cell bright purple-blue, with a dark, triangular indentation at the cell-end bar. On the hw the purple-blue restricted almost to the hw cell, just entering neighbouring cells.

Underside: as ♂.

Note: The new subspecies resembles nominotypical *cleander,* but differs from it in several characters, most notably, the underside fw postdiscal bands are considerably narrower and not dislocated at vein 4. In the ♀♀, the underside hw discal purple-blue patch is noticeably more restricted than in the nominotypical subspecies.

Arhopala aruana (Evans, 1957)

(Fig. 13: ♂, Kei; Fig. 14: ♀, Aru; Fig. 15: ♂, HT, Aru.)

Narathura cleander aruana: (Evans: 1957: 101); TL: Aru — see note 1.

Range: Aru (NHMUK), Kei, Kei Kecil (Tennent & Rawlins 2010), New Guinea (Parsons 1998). **New records** from specific Aru Islands: Wokam (2 ♂♂, iv. 2007, CARR).

Note 1: Evans (1957) described *aruana* as a subspecies of *cleander* noting only specimens from Aru. Parsons (1998: 384) recorded the taxon from New Guinea and raised it to a full species, noting its "distinctive facies". The HT ♂ is in the NHMUK (Fig. 15).

Note 2: We have examined 2 ♂♂ from the Kei Islands and they are both smaller (FwL 21 & 20.5 mm) than the 3 ♂♂ we have seen from Aru (HT FwL 22 mm and the other 2 ♂♂ both 24.5 mm) but are otherwise very similar, so we include them with *aruana*.

Arhopala athada (Staudinger, 1889)

Amblypodia athada: Staudinger (1889: 125); TL: Malacca, Peninsular Malaysia — see note 1.

Range: Cambodia, Vietnam (Inayoshi 2017), India (Assam), Burma, Peninsular Malaysia, Singapore, Borneo, Indonesia (Sumatra, Banka, Bawean, northern Maluku), Philippines (NHMUK).

Note 1: Staudinger (1889: 125) described (*Amblypodia*) *allata* from Palawan and noted its similarity to Distant's *adatha* — see 'Note 3' under *Arhopala cleander cleander*. He considered Distant's *adatha* very different from Hewitson's *adatha* and concluded they must be distinct species. Thus he introduced the name *athada* for Distant's *adatha* from Malaysia. As noted under *A. cleander cleander,* Distant (1885: 265, Tab. 23, figs. 1–2) described and illustrated both sexes from Malacca in Peninsular Malaysia. Evans (1957: 102) noted "♀ Malaya: fig. by Distant as *adatha;* type B.M. 7 ♂ 3 ♀ Malaya". Takanami (1989: 68) stated that this action by Evans must be regarded as designation of the LT. This *athada* ♀ from Malacca remains in the NHMUK Type Collection.

Note 2: Evans (1957: 101–102) listed 3 subspecies of *athada*. He described *minor* as a subspecies of *cleander,* but Eliot (1972: 6) considered *minor* to be a subspecies of *athada* and described a new subspecies from Bawean, giving a total of 5 subspecies. Only *minor* is found in Maluku.

Arhopala athada minor (Evans, 1957)

(Fig. 16: ♂, Bacan; Fig. 17: ♀, Bacan; Fig. 18: ♂, HT, Bacan; Fig. 19: ♀, Bacan.)

Narathura cleander minor: Evans (1957: 101); TL: Bacan — see note.

Range: endemic to northern Maluku — Bacan (NHMUK). **New records:** Kasiruta (1 ♂, vi. 2005), Halmahera (CARR) — see note 3 in the *Arhopala phaenops phaenops* section.

Note: Evans (1957) described *minor* as a subspecies of *cleander,* but we follow Eliot (1972: 6) and place it under *athada*. The HT ♂ is in the NHMUK (Fig. 18).

The *atrax* subgroup of the *democritus* species-group

Evans (1957: 102–105) included 13 species in his *atrax* subgroup of the *democritus* species-group. Eliot (1972: 7–14) included largely the same species in his *alea* subgroup. One species is represented in Maluku.

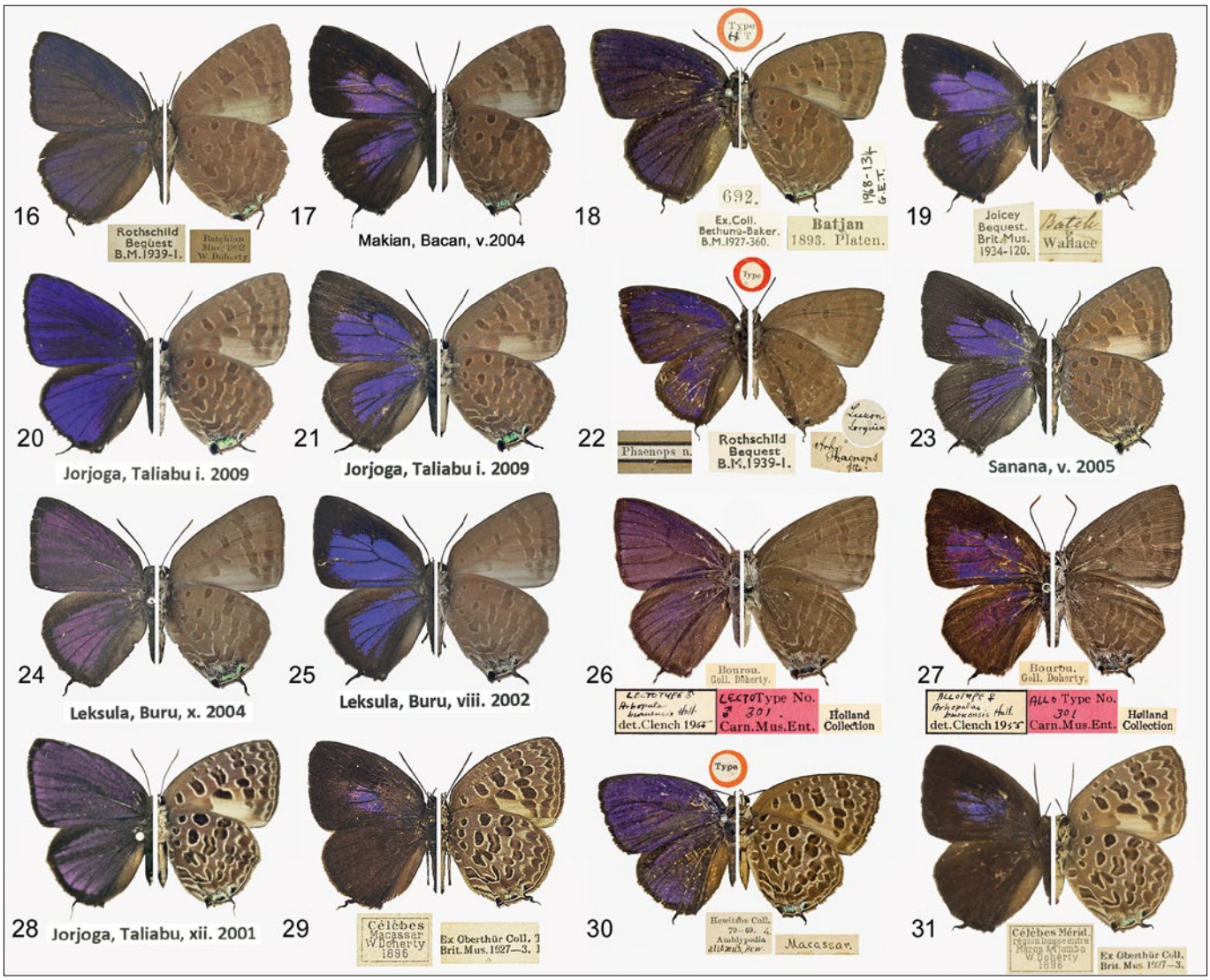


Plate 2, Figs. 16–31: *democritus* species-group. **Figs. 16–19:** *cleander* subgroup. — **Figs. 16–19:** ***Arhopala athada minor,*** Bacan: **16:** ♂, ups./ uns. (Batchian, Mar. 1892, W. Doherty, NHMUK). **17:** ♀, ups./uns. (v. 2004, CARR). **18:** ♂, HT, ups./uns. (1893, Platen, NHMUK). **19:** ♀, ups./ uns., (Batch, Wallace, NHMUK). — **Figs. 20–27:** *atrax* subgroup; subspecies of ***Arhopala phaenops*.** — **Figs. 20–23:** *A. phaenops phaenops:* **20:** ♂, ups./uns., Taliabu (Jorjoga, i. 2009, CARR). **21:** ♀, ups./uns., Taliabu (Jorjoga, i. 2009, CARR). **22:** ♂, type, ups./uns., Luzon, Philippines (Lorquin, NHMUK). **23:** ♀, ups./ uns., Sanana (v. 2005, CARR). — **Figs. 24–27:** *A. phaenops buruensis:* **24:** ♂, ups./uns., Buru (Leksula, x. 2004, CARR). **25:** ♀, ups./uns., Buru (Leksula, viii. 2002, CARR). **26:** ♂, LT, ups./uns., Buru (Bourou, Coll. Doherty, Holland Collection, CMNH). **27:** ♀, PLT, ups./uns., Buru (Bourou, Coll. Doherty, Holland Collection, CMNH). — **Figs. 28–31:** *democritus* subgroup; ***Arhopala alitaeus alitaeus:*** **28:** ♂, ups./uns., Taliabu (Jorjoga, xii. 2001, CARR). **29:** ♀, ups./uns., Sulawesi (Celebes, Macassar, 1896, W. Doherty, NHMUK). **30:** ♂, type, ups./uns., Sulawesi (Macassar, Hewitson Coll., NHMUK). **31:** ♀, ups./uns., Sulawesi (Celebes Merid., 1896, W. Doherty, NHMUK).

Plate 3, Figs. 32–49: *eumolphus* species-group, *nobilis* subgroup. — **Figs. 32–49:** Subspecies of ***Arhopala nobilis*.** — **Figs. 32–37:** *A. nobilis nobilis:* **32:** ♂, ups./uns., Seram (Kamariang, iv. 1993, CARR). **33:** ♀, ups./uns., Seram (xi. 2012, CARR). **34:** ♂, ups./uns., Obi (type *nobilior* = *nobilis*, H. Fruhstorfer, NHMUK). **35:** ♂, HT, ups./uns., Ambon (Amboin[a], Doleschall, typ., Felder Colln., NHMUK). **36:** ♀, ups./uns., Seram (Salemon, xii. 2002, CARR). **37:** ♀, ups./uns., Kei (Key, [18]98, H. Kühn , NHMUK). — **Figs. 38–43:** *A. nobilis alce:* **38:** ♂, ups./uns., Halmahera (Baru, Ibu, x. 2003, CARR). **39:** ♀, ups./uns., Halmahera (Baru, Ibu, iii. 1998, CARR). **40:** ♂, HT, ups./uns., Halmahera ("Aru" = *recte* Halmahera, Hewitson Coll., NHMUK). **41:** ♂, ups./uns., Halmahera (HT *ajusa* = *nobilis*, Gilolo, Fruhstorfer Coll., NHMUK). **42:** ♂, ups./uns., Morotai (Daeo, viii. 2004, CARR). **43:** ♂, Hewitson's figure of ♂ *alce.* — **Figs. 44–49:** *A. nobilis alcestis:* **44:** ♂, ups./uns., Aru (Gulila, Kobroor, iii. 1998, CARR). **45:** ♀, ups./uns., New Guinea (Timika, xi. 2006, CARR). **46:** ♀, Hewitson's figure of ♀ "*alce*" = *alcestis*. **47:** ♂, ups./uns., Gebe (Moluques, Ile Gebi, Chasseurs Malais de Waterstradt, 1903, NHMUK). **48:** ♂, ups./uns., New Guinea (HT *athara* = *alcestis*, Stephansort, NHMUK). **49:** ♂, type, ups./uns., New Guinea (Milne Bay, Brit. N.G., i. [18]99, A. S. Meek, NHMUK).

Arhopala phaenops C. Felder & R. Felder, 1865

Arhopala phaenops: C. Felder & R. Felder (1865: 227); TL: Luzon.

Range: Thailand (Inayoshi 2017), Burma, Peninsular Malaysia, Borneo, Indonesia (Sangir, Talaud, Buru, Obi), Philippines (NHMUK), Peleng (Seki et al. 1991), Taliabu, Sanana (Tennent & Rawlins 2010).

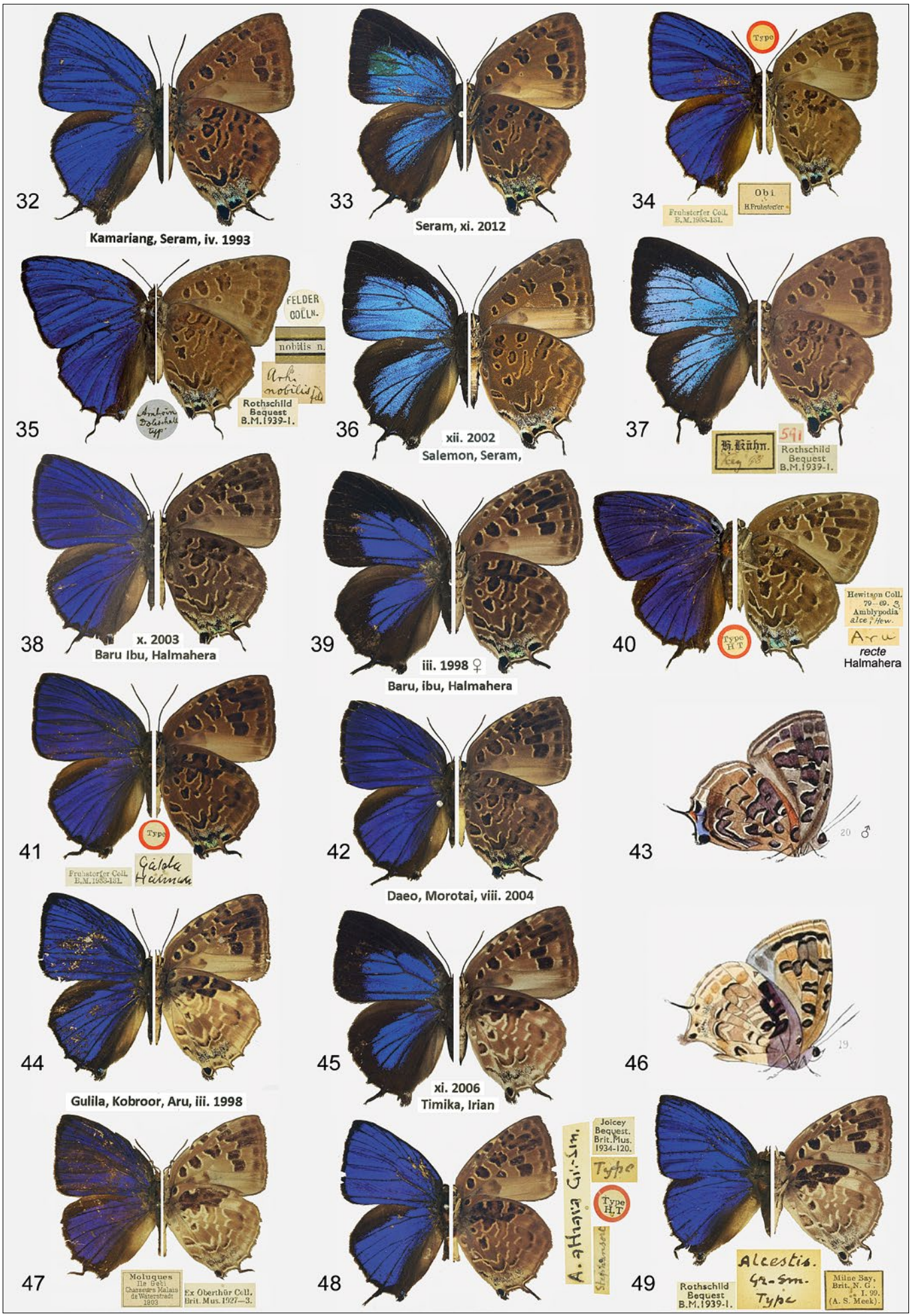
Note 1: Evans (1957: 104) listed 6 subspecies of *phaenops* including *evansi* Corbet, 1941 (TL: Malaysia). Eliot (1962: 220) gave *evansi* species status leaving 5 subspecies of *phaenops*, 2 of which occur in Maluku.

Arhopala phaenops phaenops C. & R. Felder, 1865

(Fig. 20: ♂, Taliabu; Fig. 21: ♀, Taliabu; Fig. 22: ♂ type, Luzon, Philippines; Fig. 23: ♀, Sanana.)

Arhopala phaenops: C. Felder & R. Felder (1865: 227); TL: Luzon – see note 1.

Range: Indonesia (Peleng, Sangir, Talaud, Taliabu, Sanana), Philippines. We exclude Bacan and Kasiruta – see note 3.



Note 1: The Felders (1865, in Latin and German) described the ♂ of *phaenops* from Luzon in the Philippines. They referred the name to "Boisd. in litt." and noted that the specimen/s came from Lorquin and was in their collection. Evans (1957: 104) noted that the ♂ "type" was in the NHMUK (Fig. 22).

Note 2: Bethune-Baker (1903a: 68, pl. 1, fig. 27) was the first to illustrate the species showing both surfaces of a ♂.

Note 3: Evans (1957: 104) included 2 ♂♂ and 1 ♀ from Bacan in his list of *Arhopala phaenops phaenops* material in the NHMUK. We have examined these specimens and consider they have been misidentified. They are typical of *A. athada minor,* rather than *phaenops*. The ♂ upperside fw in *minor* is a duller, more purple colour compared to the deep royal blue of *A. phaenops phaenops*.

Tennent & Rawlins (2010: 13) added Kasiruta to the known range for *phaenops* but we have examined this ♂ in CARR and confirm it is also an example of *A. athada minor*. We therefore exclude Bacan and Kasiruta from the range for *Arhopala phaenops phaenops* and add Kasiruta to the known range for *Arhopala athada minor*.

Arhopala phaenops buruensis Holland, 1900

(Fig. 24: ♂, Buru; Fig. 25: ♀, Buru; Fig. 26: ♂ LT *buruensis,* Buru; Fig. 27: PLT ♀, Buru.)

Arhopala buruensis: Holland (1900: 78); TL: Buru — see note 1.

Range: Buru, Obi (NHMUK) — see note 2.

Note 1: Holland (1900) described both sexes in detail from 5 ♂♂ and 1 ♀ from Buru. He donated his private collection exceeding 250,000 specimens to the Carnegie Museum of Natural History (CMNH), Pittsburgh. John Rawlins kindly sent photographs of a *buruensis* ♂ in the CMNH, that bears a label stating "LECTOTYPE ♂, *Arhopala buruensis* Holl., det. Clench 1955". It appears that this LT determination was never published. We therefore now formally **designate this ♂ (Fig. 26, FwL 21.2 mm) as the lectotype of *buruensis***, Holland, 1900. Additional labels read "Holland Collection" / "Bourou. Coll. Doherty." / "♂ LECTOType No. 301. Carn.Mus.Ent.". The CMNH also holds the ♀ "Allotype" (Fig. 27) and the NHMUK contains a ♂ bearing a PT label. These 2 specimens and any others from the original syntypic series should now be considered paralectotypes.

Note 2: There is 1 Obi ♂ in the NHMUK treated by Evans (1957: 104) as *buruensis* and we concur.

The *democritus* subgroup of the *democritus* species-group

Evans (1957: 105–107) listed nine species in the *democritus* subgroup. One species is represented in Maluku.

Arhopala alitaeus (Hewitson, 1862)

Amblypodia alitaeus: Hewitson (1862: 7, pl. 5, figs. 45–46); TL: Makassar.

= *Amblypodia viviana:* Röber (1887: 200, pl. 9, figs. 11 & 13); TL: Banggai.

Range: Laos, Vietnam (Inayoshi 2017); Burma; Thailand; Peninsular Malaysia; Langkawi; Singapore; Borneo; Indonesia: Sipora in the Mentawai Islands, Sulawesi Region (NHMUK), Sumatra, Java, Banggai Islands (Vane-Wright & de Jong 2003), Siberut in the Mentawai Islands (CSSK), Buton, Taliabu (Tennent & Rawlins 2010); Palawan, Philippines (NHMUK).

Note 1: Evans (1957: 106) listed 6 subspecies. Since then Schroeder & Treadaway (2000, 2002) have described 3 further subspecies from the Philippines. In addition, the taxa *mindanensis* Bethune-Baker, 1903 and *zilensis* Fruhstorfer, 1914, are now treated as subspecies of *alitaeus* (see Treadaway 1995: 75–76) giving a total of 11 subspecies. Only the nominotypical subspecies occurs in Maluku.

Note 2: Vane-wright & de Jong (2003: 123) included Java in the range for the species *alitaeus* but we have seen no other records from Java.

Arhopala alitaeus alitaeus (Hewitson, 1862)

(Fig. 28: ♂, Taliabu; Fig. 29: ♀, Sulawesi; Fig. 30: ♂ type, Sulawesi; Fig. 31: ♀, Sulawesi.)

Amblypodia alitaeus: Hewitson (1862: 7, pl. 5, figs. 45-46); TL: Makassar — see note 1.

= *Amblypodia viviana:* Röber (1887: 200, pl. 9, figs. 11 & 13); TL: Banggai — see note 2.

Range: Sulawesi, Banggai (NHMUK), Buton, Taliabu (Tennent & Rawlins 2010).

Note 1: Hewitson (1862) described only the ♂ of *alitaeus* from Makassar in Sulawesi. He illustrated both surfaces and noted that the specimen/s was in the collection of A. R. Wallace. Evans (1957: 106) noted that the ♂ "type" was in the NHMUK (Fig. 30).

Note 2: Röber (1887, in German) described both ♂ and ♀ *viviana* and illustrated both surfaces of both sexes. He stated the specimens came from Bangkei (= Banggai) and were supplied by H. Kühn. Takanami (1989: 50) designated a ♂ LT in the SMT and noted 3 PLTs. Bethune-Baker (1903a: 61) synonymised *viviana* with *alitaeus* and Evans (1957: 106) also considered them synonyms.

Annotated checklist of the *Arhopala eumolphus* species-group taxa of North Maluku and Maluku

Evans (1957: 108–113) divided his *eumolphus* species-group into four subgroups and a total of 22 species. Parsons (1998: 384) added *Arhopala critala* Felder, 1860 (omitted altogether by Evans) and transferred *Arhopala antharita* Grose Smith, 1894, to the *anthelus* species-group. All four subgroups are represented in Maluku. We note that Evans placed this species-group under the genus *Narathura* Moore, 1879, but this genus is now considered a synonym of *Arhopala*.

The *nobilis* subgroup of the *eumolphus* species-group

Evans (1957: 108) placed only *Arhopala nobilis* in this subgroup. The species occurs in Maluku.

Arhopala nobilis (C. Felder, 1860)

Amlypodia nobilis: C. Felder (1860: 453); TL: Ambon.

= *Arhopala nobilis nobilior:* Fruhstorfer (1914: 165); TL: Obi.

Range: Maluku, Waigeo, Numfor (labelled Mefor), New Guinea (NHMUK), Biak (Parsons 1998).

Note: Evans (1957: 108) listed 4 subspecies, 3 of which are found in Maluku. There has been some confusion over the TL of *alce* Hewitson, 1862 and the ranges for the subspecies *alce* and *alcestis* Grose Smith, 1902, so we discuss this in some detail below.

Arhopala nobilis nobilis (C. Felder, 1860)

(Fig. 32: ♂, Seram; Fig. 33: ♀, Seram; Fig. 34: ♂ type *nobilior* = *nobilis,* Obi; Fig. 35: ♂ HT, Ambon; Fig. 36: ♀, Seram; Fig. 37: ♀, Kei.)

Amblypodia nobilis: C. Felder (1860: 453); TL: Ambon — see note 1.

= *Arhopala nobilis nobilior:* Fruhstorfer (1914: 165); TL: Obi – see note 2.

Range: Maluku – Obi, Seram, Ambon, Kei (NHMUK) – see note 3.

Note 1: Felder (1860, in Latin) described *nobilis* without specifying the sex. He noted that the specimen/s was in "Coll. Felder." C. & R. Felder (1865: 226, pl. 29, fig. 6, in Latin and German), gave a more detailed description of the ♂ and figured the underside. They listed it under *Arhopala,* rather than *Amblypodia* and noted a single Doleschall ♂ in their collection. Evans noted that the ♂ "type" from Ambon was in the NHMUK and this is clearly the HT (Fig. 35).

Note 2: Fruhstorfer (1914) described *nobilior* without specifying the sex or number of specimens, just stating it was from Obi and "Selten" = rare. Evans (1957: 108) listed *nobilior* as a synonym of *nobilis* and noted that the ♂ "type" was in the NHMUK (Fig. 34). We have compared the *nobilis* and *nobilior* types and it is clear they represent the same taxon.

Note 3: As far as we are aware, the ♀ from Kei in the NHMUK (Fig. 37) is the only record from the Kei islands. It is clearly an example of nominotypical *nobilis*.

Arhopala nobilis alce (Hewitson, 1862)

(Fig. 38: ♂, Halmahera; Fig. 39: ♀, Halmahera; Fig. 40: ♂ HT *alce,* "Aru", *recte* Halmahera; Fig. 41: ♂ HT *ajusa* = *alce,* Halmahera; Fig. 42: ♂, Morotai; Fig. 43: Hewitson's figure of ♂ HT *alce*.)

Amblypodia nobilis alce: Hewitson (1862: 5, pl. 3, fig. 20); TL: "Aru" recte Halmahera – see note 1.

= *Arhopala nobilis ajusa:* Fruhstorfer (1914: 164); TL: Halmahera – see note 3.

Range: endemic to northern Maluku – Halmahera (NHMUK), Morotai, Kasiruta (Tennent & Rawlins 2010). **New record:** Bacan (Alisi – pers. comm.).

Note 1: Hewitson (1862) first described the ♂ and illustrated its underside in his pl. 3, fig. 20. This *alce* HT ♂ is in the NHMUK (Fig. 40). He then described the ♀, noting clear differences from the ♂ in both upperside and underside. He illustrated both surfaces of this ♀ in his figs. 18 & 19. He further stated: "In the Collection of A. R. Wallace from Aru." As discussed below the ♀ represents a different taxon.

Note 2: Bethune-Baker (1903a: 76) considered *alce* was "probably a local form of *nobilis*" noting its larger size, brighter blue and on the underside the "extremely large size of all the spots". He stated that he could find no distinction between *athara* Grose Smith, 1902 and *alce,* noting that the position of the spots mentioned by Grose Smith (as a feature for differentiating *athara*) was by no means constant in *alce* so the taxa could not be separated on that character alone. Therefore he synonymised *athara* with *alce,* but Evans (1957: 108), as we do, considered *athara* a synonym of *alcestis* – see below.

Note 3: Fruhstorfer (1914, in German) described *ajusa* from 1 ♂ from Halmahera in his collection. The HT ♂ is now in the NHMUK (Fig. 41). Evans (1957: 108) listed *ajusa* as a synonym of *alce* and we confirm this.

Note 4: Concerning the correct TL of the *alce* HT ♂ and the correct identity and locality of the "*alce*" PT ♀ illustrated by Hewitson:

- The *alce* ♂ HT bears 3 labels:

1. Red HT label;
2. Handwritten "Aru";
3. "Hewitson Coll. 79-69. *3*. Amblypodia *alce, Hew*." The italicised parts are handwritten.

- Bethune-Baker (1903a: 76, pl. 5, figs. 1 & 1a – genitalia) included *Arhopala alce* in his revision of the *Amblypodia* group, noting the habitat as Aru and Halmahera. He gave no reason for adding Halmahera to the range.
- Grose Smith (1902: 3 (60): 9) stated: "The specimen figured by Hewitson as the female of *A. Alce* is from Aru, and is quite distinct from the species which he figures as the male".
- Evans (1957: 108) merely stated: '♂ "Aru" (probably Halmaheira); type B.M.' without giving any explanation.

We have examined the *alce* and *alcestis* ♂ HTs as well as recent specimens with confirmed locations from Halmahera, Morotai, Kasiruta (northern Maluku), Aru and New Guinea and make the following observations:

- Grose Smith pointed out that Hewitson's figured ♂ and ♀ of "*alce*" represent different taxa. Hewitson's figure 20 (our Fig. 43) is an image of the HT ♂, now in the NHMUK (Fig. 40).
- The underside pattern, as well as the blue tornal markings, clearly match Fruhstorfer's *ajusa* HT and other specimens known to be from northern Maluku.
- Recent specimens known to be from Aru match Grose Smith's *alcestis* type from New Guinea as well as other specimens from New Guinea. Both lack the hw blue tornal markings present in specimens from northern Maluku, and the underside pattern of Aru and New Guinea specimens (though quite variable) clearly differs from that of northern Maluku examples. Hewitson's figured (18 & 19) ♀ of "*alce*" is evidently of the Aru/New Guinea phenotype.

We conclude therefore:

- The *alce* HT ♂ is not from Aru, but from northern Maluku, most likely Halmahera, as Evans (1957: 108) also concluded.
- The "*alce*" ♀ illustrated by Hewitson (1862: pl. 3, figs. 18 & 19) is almost certainly from Aru and is an example of the subspecies *alcestis* – see below. We show Hewitson's figure 19 in our Fig. 46.

Note 5: Concerning the distribution of the subspecies *alce* and *alcestis*:

- In addition to the *alce* HT ♂, Evans (1957: 108) also listed the following specimens of subspecies *alce* in the NHMUK: '1 ♀ from "Celebes". 7 ♂, 1 ♀ Halmaheira. 2 ♂ Aru.' The "Celebes" ♀ bears 2 labels. The first is handwritten stating only "Celebes, Lorquin". The second states "Locality Incorrect. Probably – Halmaheira". We agree with this assessment and note that Vane-Wright & de Jong (2003) did not include the species *Arhopala nobilis* in their book on the butterflies of Sulawesi. In the NHMUK we were unable to find the 2 Aru ♂♂ listed under *alce* by Evans. The only specimen with an Aru label we located was a typical *alcestis* ♂, correctly placed with the *alcestis* series. We conclude that the only subspecies of *nobilis* found on Aru is *alcestis*.
- Evans listed the following specimens of subspecies *alcestis* in the NHMUK: the Milne Bay "type" and 13 specimens from New Guinea, 1 ♂ from Gebe and 1 ♂ from Aru, as well as: "1 ♀ 'Batchian'." The ♀ with the Batchian label is clearly an example of *alcestis* and we consider, as Evans suggested with his inverted commas, this is a mistaken locality label.

Arhopala nobilis alcestis Grose Smith, 1902

(Fig. 44: ♂, Aru; Fig. 45: ♀, New Guinea; Fig. 46: Hewitson's figure of ♀ "*alce*" = *alcestis;* Fig. 47: ♂, Gebe; Fig. 48: ♂, HT *athara* [= *alcestis*]; Fig. 49: ♂ type *alcestis,* New Guinea.)

Arhopola alcestis: Grose Smith (1902: 3 (60): 9, pl. 25, fig.1); TL: Milne Bay, New Guinea – see note 1.

= *Arhopala athara:* Grose Smith (1902: 3 (60): 9, pl. 25, fig. 2); TL: Stephansort, New Guinea – see note 2.

= *Amblypodia caelestis:* Röber (1931: 390); TL: SW New Guinea – see note 3.

Range: Maluku (Gebe, Aru), Waigeo, New Guinea (NHMUK).

Note 1: Grose Smith (1902) described the *alcestis* ♂ from Milne Bay in New Guinea and illustrated the underside. He noted that

the specimen/s came from Meek and was in the collection of the Hon. Walter Rothschild. Evans (1957: 108) noted that the ♂ "type" was in the NHMUK (Fig. 49). Grose Smith added: "The specimen figured by Hewitson as the ♀ of *A. alce* is from Aru, and is quite distinct from the species which he figures as the male". We show Hewitson's illustrations (his figs. 19 & 20) of the undersides of the "*alce*" ♀ and the *alce* HT ♂ in our Figs. 43 & 46. The Hewitson "*alce*" ♀ is clearly an example of *alcestis* and matches the underside of the *alcestis* ♂ type from New Guinea.

Note 2: Grose Smith (1902) described the ♂ of *athara* from Stephansort in New Guinea. He reported that *athara* had broader black upperside margins than *alcestis* and some minor differences in the pattern of the underside spots. He illustrated the underside and noted that the specimen was in his collection. The HT ♂ is now in the NHMUK (Fig. 48). As discussed in "Note 2" under *A. nobilis alce,* Bethune-Baker (1903a: 76) considered *athara* Grose Smith, 1902 as a synonym of *alce,* whereas Evans (1957: 108) listed *athara* as a synonym of *alcestis*. We have compared the ♂ types of *alce, alcestis* and *athara* and we agree with Evans. The undersides of New Guinea specimens do vary considerably in how dark or pale they are. The *athara* HT is an example of the darker form, whilst the *alcestis* ♂ type from New Guinea, Hewitson's "*alce*" ♀ and the 2 Aru ♂♂ we have examined, represent the paler, more two-toned phenotype.

Parsons (1998: 384) reported that in PNG *Arhopala nobilis* is a widespread lowland species, so we consider it is likely to occur throughout mainland New Guinea as one subspecies. Parsons wrote: "The und ground colour, and the width of the markings, are somewhat variable and Eliot's suggestion (in d'Abrera 1978 [actually 1977: 310] that *anthara* [sic] and *alcestis* are probably specifically distinct from each other is incorrect." We agree that *athara* is a synonym of *alcestis*.

Note 3: Röber (1931: 390, in German) briefly described *caelestis* from SW New Guinea and illustrated the ♂ underside. There is no mention of where the type was deposited but Parsons (1998: 384) noted that it was in the "RML" (= NNML, Leiden). We have been unable to examine this specimen but Evans (1957: 108) listed *caelestis* as a synonym of *alcestis* and Parsons (1998: 384) noted Evans' synonymy. Röber's figure of *caelestis* is consistent with the a*lcestis* type.

The *wildei* subgroup of the *eumolphus* species-group

Evans (1957: 108–109) included six species in the *wildei* subgroup but as noted above, Parsons (1998: 384) transferred *antharita* to the *anthelus* species-group. Parsons (1998: 384) noted that Evans (1957) omitted *critala* from his revision of the *Arhopala* group because "at the time, it was not recognised as belonging to the genus due to its very accurate mimicry of various *Danis* species". Parsons included *critala* in the *eumolphus* species-group, but he didn't specify its subgroup. We consider it belongs in the *wildei* subgroup, bringing the total species in this subgroup back to six. Five are recorded from Maluku.

Arhopala critala (C. Felder, 1860)

(Fig. 50: ♂, Seram; Fig. 51: ♀, Ambon; Fig. 52: ♂, Kei; Fig. 53: ♀, type, Ambon.)

Amblypodia critala: C. Felder (1860: 453); TL: Ambon — see note 1.

Range: Ambon, Seram, Kei, New Guinea (Parsons 1998). **New record:** Kelang (1 ♂, vi. 2003, coll. Yagishita) — see note 2.

Note 1: Felder (1860), in Latin, briefly described the ♀ of *critala* from Ambon. He noted that the specimen/s was in "Coll. Felder" and a ♀ "type" in poor condition is in the NHMUK Type Collection (Fig. 53 — both hindwings have patch repairs).

Felder astutely recognised the species belonged with *Amblypodia* (i.e., *Arhopala*) and noted that it was very different to its congeners, but superficially resembled "*Thysonoto Davidi* Cram. (*D. sebae* Boisd.)", the species now referred to as *Danis danis*.

Hewitson (1862: 15) noted Felder's comments but simply recorded its similarity to "*P. danis* of Cramer".

Hewitson (1868: 9, pl. 4, figs. 26–27) and Staudinger (1888: 281, pl. 96) both illustrated the upperside and underside of a ♂, treating the species under *Amblypodia* and *Arhopala* respectively.

Bethune-Baker (1903a: 152) remarked that this was a very rare example of mimicry in the *Arhopala* group: "the species mimicking the genus *Danais* (sic) beautifully."

In the light of these authors all placing *critala* under *Amblypodia*/*Arhopala* despite its superficial similarity with *Danis*, it is odd that Evans (1957) omitted the species from his *Arhopala* group revision.

Eliot (1973: 399) discussed this mimicry between *Arhopala critala* and the *Danis* species.

Note 2: This species has an unusual distribution being known from central Maluku (Ambon, Seram, Kelang) then Kei and New Guinea, but currently unknown from Aru.

Arhopala wildei Miskin, 1891

Arhopala wildei: Miskin (1891: 71); TL: Cairns — see note 1.

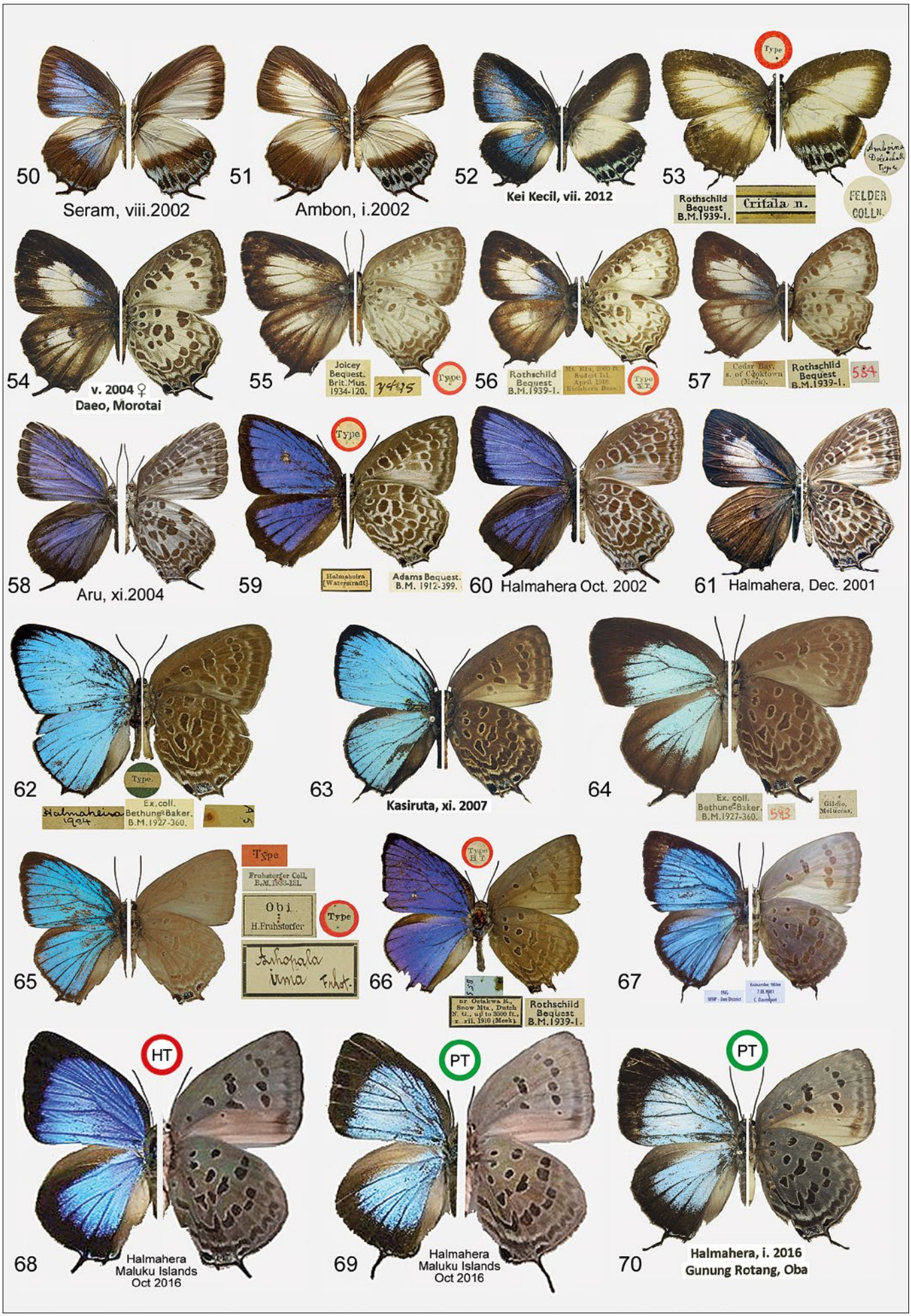
Range: New Guinea, some Milne Bay Islands, Australia (NHMUK; Parsons 1998), Morotai (Tennent & Rawlins, 2010). **New record:** Aru — see below

Note 1: Miskin (1891) described both sexes in detail from a single pair captured in Cairns, Queensland, Australia. He noted that the specimens were in the Queensland Museum (Brisbane) where the HT ♂ remains.

Bethune-Baker (1903a: 151, pl. 1, figs. 18–19) gave a further description of the ♂ and ♀ and illustrated both surfaces of both sexes. He noted "*Amblypodia cupido* Staudinger, in litt." as a synonym, although we consider it a *nomen nudum*.

Note 2: Parsons (1998: 384) mistakenly stated *wildei* was a tailless species. Miskin's description did not mention tails, but did note the worn condition of the specimens. Bethune-Baker's figures as well as Parsons' own photographs show a tailed species.

Plate 4, Figs. 50–70: *eumolphus* species-group, *wildei* subgroup. — **Figs. 50–53:** ***Arhopala critala:*** **50:** ♂, ups./uns., Seram (viii. 2002, coll. Yagishita). **51:** ♀, ups./uns., Ambon (i. 2002, coll. Yagishita). **52:** ♂, ups./uns., Kei (Kei Kecil, vii. 2012, CARR). **53:** ♀, type, ups./uns., Ambon (Amboina, Doleschall type, Felder Colln., NHMUK). — **Figs. 54–58:** Subspecies of ***Arhopala wildei.*** **Figs. 54–55, 58:** *A. wildei neva:* **54:** ♀, ups./uns., Morotai (v. 2004, CARR). **55:** ♀, HT, ups./uns., New Guinea (Joicey Bequest. Brit. Mus. 1934-120, NHMUK). **58:** ♂, ups./uns., Aru (xi. 2004, coll. Yagishita). — **Fig. 56:** *A. wildei soda:* ♀, HT, ups./uns., Sudest Island (Mt. Riu, 2000 ft., April, 1916, Eichhorn Bros., NHMUK). — **Fig. 57:** *A. wildei wildei:* ♀, ups./uns., Queensland (Cedar Bay, s. of Cooktown, Meek, NHMUK). — **Figs. 59–61:** ***Arhopala halma,*** Halmahera: **59:** ♂, HT, ups./uns. (Halmaheira, Waterstradt, NHMUK). **60:** ♂, ups./uns. (x. 2002, coll. Yagishita). **61:** ♀, ups./uns. (xii. 2001, coll. Yagishita). — **Figs. 62–64:** ***Arhopala halmaheira:*** **62:** ♂, type, ups./uns., Halmahera (Halmaheira, 1904, ex coll. Bethune-Baker, NHMUK). **63:** ♂, ups./uns., Kasiruta (xi. 2007, CARR). **64:** ♀, ups./uns., Halmahera (Gilolo, Moluccas, ex coll. Bethune-Baker, NHMUK). — **Figs. 65–70:** Subspecies of ***Arhopala irma:*** **Fig. 65:** *A. irma irma*: ♂, HT, ups./uns., Obi (H. Fruhstorfer, NHMUK). — **Figs: 66–67:** *A. irma purpura:* **66:** ♂, HT, ups./uns., New Guinea (nr. Oetakwa R., Snow Mts., Dutch N.G., up to 3500 ft., x.–xii. 1910, Meek, NHMUK). **67:** ♀, ups./uns., New Guinea (Koinambe, 980 m, WHP, PNG, 7. iii. 1981, coll. C. Davenport). — **Figs. 68–70:** *A. irma* ***kotaroi*** **ssp. n.,** Halmahera: **68:** ♂, HT, ups./uns. (Maluku Islands, x. 2016, coll. Research Institute of Evolutionary Biology, Tokyo). **69:** ♀, PT, ups./uns. (Maluku Islands, x. 2016, coll. Saito). **70:** ♀, PT, ups./uns. (Gunung Rotang, Oba, i. 2016, CARR).



Note 3: Evans (1957: 108–109) described 2 new subspecies — *soda* from Sudest Island and *neva* from New Guinea —, giving a total of 3. Parsons (1998: 385) recognised these subspecies, but we note they are very similar with some infrasubspecific individual variation.

Arhopala wildei neva (Evans, 1957)

(Fig. 54: ♀, Morotai; Fig. 55: ♀ HT, New Guinea; Fig. 58: ♂, Aru.)

Narathura wildei neva: Evans (1957: 109); TL: Stephansort — see note 1.

Range: New Guinea (NHMUK), Morotai (Tennent & Rawlins 2010 — see note 3). **New records:** Aru (1 ♂, Aru, xi. 2004, coll. Yagishita; Wokam Island, K. Nagai, pers. comm.) — see note 2.

Note 1: Evans (1957) very briefly described both sexes of *neva* from 1 ♂ and 1 ♀ from different locations in New Guinea. He chose the ♀ as the HT (Fig. 55) and it remains in the NHMUK, along with the ♂ from the Ninay Valley in West Papua listed by Evans.

Note 2: This subspecies was previously only recorded from New Guinea (Evans 1957: 109, Parsons 1998: 385) but we confirm its presence on Aru. The illustrated specimen (Fig. 58) matches the *neva* ♂ listed by Evans as in the NHMUK, as well as Parsons (1998: pl. 56, figs. 1498–1499) illustration of a ♂ from PNG.

Note 3: Tennent & Rawlins (2010: 13) recorded a "large ♀ specimen" of *wildei* from Morotai (Fig. 54). They recognised it could be an undescribed subspecies, but placed it provisionally with nominotypical *wildei*. It is larger than any other *A. wildei* specimens we have seen. We have compared it to ♀♀ of the three described subspecies — *neva, soda* and *wildei* (Figs. 55–57). We also acknowledge it may represent a new subspecies but in the absence of further material, partly for biogeographical reasons, we place it with *neva* and include it here. Evans (1957: 108–109) briefly described *soda* noting that the HT was a ♀ in the NHMUK from Sudest Island (Fig. 56). The specimen bears a red type label reading: "Type AT" but the AT is crossed out in pencil.

Arhopala halma (Evans, 1957)

(Fig. 59: ♂ HT, *halma,* Halmahera; Fig. 60: ♂, Halmahera; Fig. 61: ♀, Halmahera.)

Narathura halma: Evans (1957: 109); TL: Halmahera — see note 1.

Range: known only from Halmahera (NHMUK).

Note 1: Evans (1957) described only the ♂ of *halma* from Halmahera. The HT ♂ is in the NHMUK (Fig. 59) and has only tail stubs suggesting tails have been lost. The ♂ illustrated in Fig. 60, as well as the ♀ shown in Fig. 61, confirm that *A. halma* is a tailed species.

Note 2: We present here the first record and illustration of the ♀ (Fig. 61, FwL 25 mm, xii. 2001, Halmahera, coll. Yagishita).

Arhopala halmaheira Bethune-Baker, 1904

(Fig. 62: ♂ type, Halmahera; Fig. 63: ♂, Kasiruta; Fig. 64: ♀, Halmahera.)

Arhopala halmaheira: Bethune-Baker (1904: 233); TL: Halmahera — see note 1.

Range: endemic to northern Maluku — Halmahera (NHMUK), Morotai, Kasiruta (Tennent & Rawlins 2010).

Note 1: Bethune-Baker (1904) described in detail the ♂ of *halmaheira*. He did not specify the number of specimens but noted that the type from Halmahera was in his collection. Evans (1957: 109) stated that the ♂ "type" from Halmahera was in the NHMUK (Fig. 62), along with an additional 4 ♂♂ and 2 ♀♀.

Arhopala irma Fruhstorfer, 1914

Arhopala irma: Fruhstorfer (1914: 134); TL: Obi.

Range: Maluku, Ron Island, New Guinea (NHMUK).

Note 1: The nominotypical subspecies was described from Obi. Evans (1957: 109) described a further subspecies — *purpura* — from New Guinea. The *purpura* HT ♂ is in the NHMUK (Fig. 66) and was illustrated by Parsons (1998: pl. 56, 1498–1499). Evans recorded that the NHMUK also held 1 *purpura* ♀ from Ron Island. Parsons (1998: 386) noted that only a few specimens of *purpura* were known and considered it might be a distinct species, recording some clear differences from nominotypical *irma*.

Note 2: The specimen figured by d'Abrera (1977: 310; 1990: 310) as the ♀ HT of *purpura* is not the HT (which as noted above, is a ♂) but the specimen from Ron Island listed by Evans (1957: 109) as present in the NHMUK.

Note 3: A pair of large *Arhopala* from Halmahera in the collection of Kotaro Saito appears to represent a related taxon. The ♂ and ♀ undersides are identical and they are clearly a 'pair' (Figs. 68, 69).

The ♀ somewhat resembles the ♀ of *purpur*a from Ron Island in the NHMUK, as well as the ♀ illustrated by Parsons (1998: pl. 56, figs. 1509–1510) and a ♀ in coll. Davenport (Fig. 67, FwL 22 mm, wingspan: 43 mm, PNG, WHP, Jimi District, Koinambe, 980 m, 7. iii. 1981). However, the Halmahera ♀ has wider black upperside borders and a greenish-brown underside ground colour, rather than the brown with faint mauve sheen present in ♀ *purpura*.

The ♂ from Halmahera is very different on the upperside from the ♂ HTs of *irma* and *purpura* but the underside markings are similar, with some minor differences discussed below. We consider it possible that these 3 taxa may comprise 2 species — *irma* from Obi as one, whilst *purpura* and the Halmahera specimens represent two subspecies of a second species. For now, we treat the pair from Halmahera as a new (third) subspeciess of *irma,* which we describe below, after the section on nominotypical *irma*.

Arhopala irma irma Fruhstorfer, 1914

(Fig. 65: ♂ HT, Obi.)

Arhopala irma: Fruhstorfer (1914: 134); TL: Obi — see note 1.

Range: endemic to Obi.

Note 1: Fruhstorfer (1914) described the taxon from just 1 ♂ from Obi. He noted that the specimen was in "Type Coll. Fruhstorfer". Evans (1957: 109) recorded that the "unique" HT ♂ was in the NHMUK (Fig. 65). It remains the only known specimen of nominotypical *irma*.

Unusally, Fruhstorfer (1914: 134) gave a relatively detailed description, possibly because Irma was his wife's name! He noted that the blue patches on the upperside were as extensive as in *Arhopala thamyras* Linnaeus, 1758, and that the blue was as intensively glistening and brightly shining as in *thamyras,* but the peculiar apical violet iridescence was absent. He added that the black distal border was more extensive than in *thamyras,* and the veins blackish dusted on both wings.

Evans (1957: 109) concisely described the HT ♂ upperside as "shining light blue, border 2 to 1 mm, veins narrowly black" and the underside as "light brown, markings faint."

Arhopala irma kotaroi ssp. n.

(Figs. 68: ♂ HT, Halmahera; Fig. 69: ♀ PT, Halmahera; Fig. 70: ♀ PT, Halmahera.)

Holotype ♂: Indonesia, Halmahera, x. 2016 (coll. of the Research Institute of Evolutionary Biology, Tokyo).

Paratypes (in total 2 ♀♀): 1 ♀, same data as HT (coll. Saito); 1 ♀, Gunung Rotang, Oba, Halmahera, i. 2016 (CARR).

Etymology: named for Kotaro Saito who is kindly donating the HT ♂ from his collection to the Research Institute of Evolutionary Biology, Tokyo.

Range: endemic to Halmahera.

Diagnosis and description

♂ (Fig. 68): FwL 30 mm.

Upperside: shiny, bright blue without any greenish tinge and with broad dark borders, measuring 7 mm at the fw apex, reducing steadily to 2 mm near the tornus. Fw costa black. Width of hw border along termen approx. 4 mm. Hw spaces 6 and 7 blue only in their posterior edges, otherwise black. A thin marginal line of light blue along the tornal margin, reaching the tail at vein 2. Tornal lobe not strongly projecting. Veins black.

Underside: drab olive-green with strongly contrasting, dark brown, macular markings. On the fw a series of similar sized, rounded spots, dislocated at vein 4. Postdiscal spots in spaces 4–6 forming a slight curve, as opposed to a straight line in *purpura*. The dark bar at cell end divided into fragments. A tiny basal, but no discal spot in space 1b. A large triangular spot at the base of space 2, much larger than in the *purpura* and nominotypical *irma* HTs.

Hw postdiscal band partly dislocated at vein 2; completely at vein 6. A black tornal spot in space 1a and tornal metallic green scales in space 2. On both wings a marginal series of faint chevron-like markings fading out towards the apex.

♀ (Figs. 69, 70): FwL 27–30 mm.

Upperside: as ♂, but a lighter, shiny sky blue.

Underside: as ♂, but without basal spot in fw space 1b. Instead, a tiny postdiscal spot in space 1b forming a straight line with the larger postdiscal spots in spaces 2 & 3.

The *acetes* subgroup of the *eumolphus* species-group

Evans (1957: 109–110) included three species in this subgroup, two of which occur in Maluku: *Arhopala acetes* and *A. tephlis*.

Arhopala acetes (Hewitson, 1862)

(Fig. 71: ♂ Taliabu; Fig. 72: ♀ Peleng; Fig. 73: ♂ Buton; Fig. 74: ♂ LT *kitjila* [= *acetes*], Sulawesi; Fig. 75: ♀ HT *acetes*, Sulawesi.)

Amblypodia acetes: Hewitson (1862: 5, pl. 3, figs. 14–15); TL: Makassar — see note 1.

= *Arhopala acetes kitjila:* Ribbe (1926: 87); TL: W. Sulawesi — see note 2.

Range: endemic to the Sulawesi Region — Sulawesi, Talaud, Banggai, Tukangbesi group (NHMUK), Salayer Island (Ribbe 1926), Binongko in the Tukangbesi Islands, Buton, Muna, Peleng (Tennent & Rawlins 2010). — **New records:** Wangiwangi in the Tukangbesi Islands (1 ♂, ii. 2015; 1 ♀, vii. 2014, CARR); Taliabu (coll. Yagishita) — see note 3.

Note 1: Hewitson (1862) described only the ♀ of *acetes* from Makassar, Sulawesi, illustrating both surfaces. He noted that the specimen/s was in the collection of A. R. Wallace. The HT ♀ (Fig. 75) is now in the NHMUK.

Note 2: Ribbe (1926, in German) said only that *kitjila* was a small form of *acetes* (45 mm) and he had specimens from Kalawara and Tombugu in Sulawesi, as well as Salayer. He noted (p. 78) that the types described in this paper were in the Dresden (SMT) and Munich (ZSM) museums. Takanami (1989: 51, figs. B-30a & B-30b) designated a LT ♂ (Fig. 74) from Sulawesi in the SMT.

Evans (1957: 109) listed *kitjila* as a synonym of *acetes* and we agree.

Note 3: This species is restricted to, but widely distributed in, the Sulawesi Region and here we add the first record from the Sula Islands (1 ♂, Taliabu, 1997, coll. Yagishita). We can see no significant differences from Sulawesi *acetes* ♂♂.

Arhopala tephlis (Hewitson, 1869)

Amblypodia tephlis: Hewitson (1869: 14d, pl. 3c, figs. 57, 58).

Range: Sulawesi Region and Maluku.

Note 1: Evans (1957: 109) recorded 2 subspecies of *tephlis* — the nominotypical from Halmahera and *bicolora* Röber, 1886. A third subspecies has since been described from Palawan — *A. tephlis unnoi* Hayashi, 1976 —, and we describe a fourth below.

Note 2: Röber (1886: 71, pl. 5, fig. 7, in German) described only the ♀ of *bicolora* from Bantimurung in S. Sulawesi and illustrated both surfaces. He stated (p. 45) that all the specimens used for his paper were from the Ribbe collection and that some specimens ex Ribbe collection were now in his own collection. Most of the Ribbe collection went to the SMT in Dresden but as Draeseke (1926: 180) noted, some specimens went to Munich (ZSM).

A letter (pers. comm. Dr. Krause of the SMT, 11. xii. 1997) stated that the Ribbe collection survived the war, because it was kept in the home of Draeseke, the curator. Therefore, the SMT is the most likely place for the *bicolora* type but the taxon was not included by Takanami (1989) and we have been unable to locate the type.

Note 3: Bethune-Baker (1903a: 53) synonymised *bicolora* with *tephlis*, noting the species to be very variable. The series of *bicolora* in the NHMUK exhibits a very stable phenotypic appearance, clearly different from nominotypical *tephlis*. Both Evans (1957: 109) and Vane-Wright & de Jong (2003: 123) considered them distinct subspecies, as do we.

Note 4: C. Müller collected 1 *tephlis* ♂ in Taliabu (Fig. 80). Tennent & Rawlins (2010: 14) provisionally placed this with subspecies *bicolora* but we have examined photographs of the specimen and conclude it differs from the other 2 Indonesian subspecies of *tephlis* and the Philippine subspecies *unnoi* Hayashi, 1976. We describe this new subspecies from Taliabu below, after the section on nominotypical *tephlis*.

Arhopala tephlis tephlis (Hewitson, 1869)

(Figs. 76: ♂ HT, Halmahera, Hewitson's figure; Fig. 77: ♂ HT, Halmahera; Fig. 78: ♀, Halmahera; Fig. 79: ♀, Morotai.)

Amblypodia tephlis: Hewitson (1869: 14d, pl. 3c, figs. 57 & 58); TL: Gilolo — see note 1.

Range: endemic to northern Maluku, Halmahera (NHMUK). — **New record:** Morotai (1 ♀, i. 2008, coll. Yagishita) — see note 2.

Note 1: Hewitson (1869) described and illustrated both surfaces of the ♂ of *tephlis* from Gilolo. Gilolo is an old name for Halmahera and for the town of Jailolo in central Halmahera. He noted that the specimen was "in Dr. Boisduval's collection" and recorded as a synonym "*Arhopala Tephlis*, Boisduval, Ms." The HT ♂ (Fig. 77) is in the NHMUK.

Evans (1957: 109) indicated that the type was the only specimen known. D'Abrera (1977: 310; 1990: 310) included *Arhopala tephlis* but did not illustrate the unique ♂ type. He noted that "a large series of what appears to be a related (but variable) butterfly has been taken in the Celebes and has been named subspecies *bicolora* Röber." He added that the *tephlis* type from Halmahera may have been a rare 'visitor' or intruder from the Celebes. However, as noted earlier, the series of *bicolora* in the NHMUK exhibits a very stable phenotypic appearance and the 3 nominotypical *tephlis* specimens we have examined from northern Maluku are clearly distinct.

Note 2: Akira Yagishita has 2 *tephlis* ♀♀ in his collection — one each from Halmahera and Morotai. The underside of the ♀ from Morotai matches that of the Halmahera HT ♂ very closely, but the white costal streak from base to termen on the hw underside is more developed, whereas it is reduced in the recent ♀ from Halmahera (vii. 2007, coll. Yagishita). The Morotai ♀ exhibits narrower upperside black borders than the Halmahera ♀ and it is possible the Morotai population represents a distinct subspecies, however further specimens are needed to confirm this.

Arhopala tephlis ***mulleri*** **ssp. n.**

(Fig. 80: ♂ HT, Taliabu.)

Holotype ♂: Indonesia, Sula Islands, Central Taliabu, 800 m, 12. vii. 2003, collector C. Müller (Australian Museum [AM], Sydney).

No paratypes.

Etymology: named for Chris Müller who is kindly donating the HT ♂ to the Australian Museum.

Range: Taliabu in the Sula Islands.

Diagnosis and description

♂ (Fig. 80): FwL 22.5 mm.

Upperside: Shiny, dark blue with black margins broader than *tephlis*, but similar to *bicolora,* (♂ Fig. 82) measuring 1.6 mm at the tornus and along the termen, increasing at the apex to 2.6 mm. Costal margin black. Hw border as broad as on the fw, expanding in spaces 1a and 1b. Hw spaces 5 and 6 blue only in their posterior areas, otherwise black. Tornal lobe not conspicuously projecting. A long tail at vein 2.

Underside: Uniformly dark brown with rather large, macular markings outlined with white, being not much darker than the ground colour. The fw postdiscal series consisting of elongate spots, longer than in other subspecies. The spot in space 4 shifted out distad. Spots in spaces 5–7 continuous, of similar size. Cell spots large with thick white edgings. 2 small postdiscal spots in space 1b. Spaces 1a & 1b pale brown. Hw uniformly dark brown, very different from all other subspecies; very slightly whitened in spaces 4–7 just distad to the postdiscal spots, but lacking the pale streak that runs the length of space 6 in *tephlis* and the very pale space between the discal and postdiscal spots in spaces 6 & 7 present in *bicolora* (Figs. 81, 82); completely different from the mainly white underside of the Philippine subspecies *unnoi*. The postdiscal band in spaces 2–5 consisting of small rounded spots. Spots in spaces 6–7 larger and of similar size and almost rectangular in outline, conjoined, so their inner edges are in line; these spots much longer than in other subspecies. Median spots large. Basal and median spots in space 7 large, conjoined. Tornal lobe small. 2 blackish marginal spots with a few blues scales in spaces 1b and 2 flanking the tail.

The *eumolphus* subgroup of the *eumolphus* species-group

Evans (1957: 110–113) included 12 species in this subgroup. Only one is recorded from Maluku.

Arhopala chamaeleona Bethune-Baker, 1903

Arhopala chamaeleona: Bethune-Baker (1903b: 217); TL: Upper Aroa River, New Guinea — see note 1.

= *Arhopala elagabulus:* Fruhstorfer (1914: 124); TL: Aroa River, New Guinea — see notes 2 & 4.

= *Arhopala restricta:* Rothschild (1915: 36, pl. 1, fig. 16); TL: Base Camp, 20 miles from the mouth of Utakwa River, New Guinea — see note 3.

= *Amblypodia heliogabulus:* Seitz (1926: 959) — a misspelling of *elagabulus* Fruhstorfer.

= *Arhopala heliagabulus:* Evans (1957: 112) — just a misspelling of *heliogabulus* Seitz!

= *Arhopala elegabulus:* Evans (1957: 112) — another misspelling of *elagabulus* Fruhstorfer.

Range: Maluku, Biak, Numfor (labelled Mefor), Yapen, New Guinea, Philippines (NHMUK).

Note 1: Bethune-Baker (1903b) described in detail both sexes of *chamaeleona* in a short paper covering only this taxon. He noted that the type was in the Tring Museum. The HT ♂ is now in the NHMUK.

Note 2: Fruhstorfer (1914, in Latin) described *elagabulus* from 4 ♂♂ from the Aroa River in New Guinea. At the end of his description he noted that if *hellenore* Doherty, 1889 turned out to be a valid species (rather than a form of *eumolphus* Cramer, 1780) he would regard *elagabulus* as its easternmost subspecies — i.e., *Arhopala hellenore elagabulus* Fruhstorfer. However, Evans (1957) and subsequent authors consider *eumolphus*, *hellenore* and *chamaeleona* as distinct species.

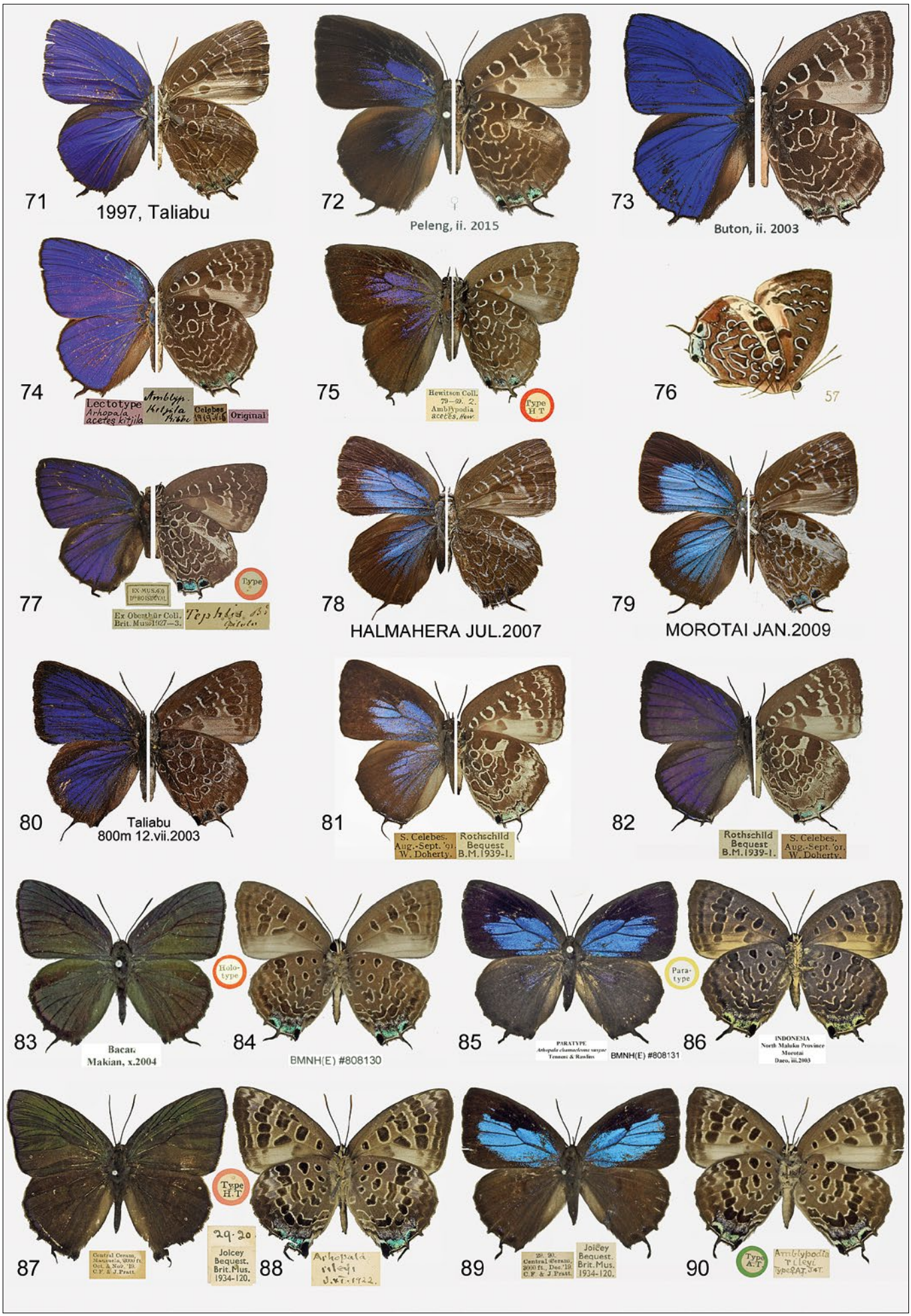
Fruhstorfer recorded that the specimens were in his collection and the HT ♂ is now in the NHMUK.

Note 3: Rothschild (1915: 36) described *restricta* from "1 ♂ Base Camp. Dec. 1912." But he was clearly describing a ♀ as he recorded a brown-black upperside with violet-blue on the basal area of the fws. His illustration depicts the upperside of a ♀. The HT ♀ is now in the NHMUK.

Note 4: Evans (1957: 112) listed *elagabulus* and *restricta* as synonyms of *chamaeleona*. We concur.

Note 5: Evans (1957: 112) listed 2 subspecies of *chamaeleona*. Two further subspecies have been described from the Philippines and 1 from northern Maluku, giving a total of 5 subspecies, 2 of which occur in Maluku. This is the only species of *Arhopala* in Maluku with a green upperside in the ♂.

Plate 5, Figs. 71–82: *eumolphus* species-group, *acetes* subgroup. — **Figs. 71–75:** ***Arhopala acetes:*** **71:** ♂, ups./uns., Taliabu (1997, coll. Yagishita). **72:** ♀, ups./uns., Peleng (ii. 2015, CARR). **73:** ♂, ups./uns., Buton (ii. 2003, CARR). **74:** ♂, ups./uns., Sulawesi (LT *kitjila* = *acetes*, Celebes, 1919, SMT). **75:** ♀, HT, ups./uns., Sulawesi (Hewitson Coll., NHMUK). — **Figs. 76–82:** Subspecies of ***Arhopala tephlis*****. Figs. 76–79:** *A. tephlis tephlis:* **76:** ♂, uns., Hewitson's figure of ♂ HT. **77:** ♂, HT, ups./uns., Halmahera (Gilolo, ex Musaeo Dr. Boisduval, ex Oberthür Coll., NHMUK). **78:** ♀, ups./ uns., Halmahera (vii. 2007, coll. Yagishita). **79:** ♀, ups./uns., Morotai (i. 2009, coll. Yagishita). — **Fig. 80:** *A. tephlis* ***mulleri*** **ssp. n.:** ♂, HT, ups./uns., Taliabu (Central Taliabu, 800 m, 12. vii. 2003, Australian Museum). — **Figs. 81–82:** *A. tephlis bicolora,* Sulawesi (S. Celebes, Aug.–Sept. [18]91, W. Doherty, NHMUK): **81:** ♀, ups./uns. **82:** ♂, ups./uns. — **Figs. 83–90,** *eumolphus* subgroup, subspecies of ***Arhopala chamaeleona*****. Figs. 83–86:** *A. chamaeleona susyae:* **83–84:** ♂, HT, ups./uns., Bacan (Makian, x. 2004, NHMUK). **85–86:** ♀, PT, ups./uns., Morotai (Daeo, iii. 2003, NHMUK). — **Figs. 87–90:** *A. chamaeleona rileyi,* Seram: **87–88:** ♂, HT, ups./uns. (Central Ceram, Manusela, 3000 ft., Oct. & Nov. [19]19, C. F. & J. Pratt, NHMUK). **89–90:** ♀, PT, ups./uns. (Central Ceram, Manusela, 3000 ft., Oct. & Nov. [19]19, C. F. & J. Pratt, NHMUK).



Arhopala chamaeleona susyae Tennent & Rawlins, 2010

(Figs. 83–84: ♂ HT, Bacan; Figs. 85–86: ♀ PT, Morotai.)

Arhopala chamaeleona susyae: Tennent & Rawlins (2010: 14, figs. 26–29); TL: Bacan — see note 1.

Range: endemic to northern Maluku: Morotai, Bacan (Tennent & Rawlins 2010). — **New record:** Halmahera (1 ♂, II. 2016; 1 ♀, V. 2010, coll. Yagishita).

Note 1: Tennent & Rawlins (2010) described and illustrated both sexes of *susyae* from 1 pair from Bacan and 2 ♀♀ from Morotai. The HT ♂ and a PT ♀ from Morotai are in the NHMUK (Figs. 83–86).

Note 2: The *susyae* pair from Halmahera in Yagishita's collection clearly belongs to this subspecies.

Arhopala chamaeleona rileyi Joicey & Talbot, 1922

(Figs. 87–88: ♂ HT, Seram; Figs. 89–90: ♀ PT [AT], Seram.)

Arhopala rileyi: Joicey & Talbot (1922: 355); TL: Manusela, Seram — see note.

Range: endemic to Seram (NHMUK).

Note: Joicey & Talbot (1922) described *rileyi* from 2 pairs collected by the Pratt brothers from Mount Manusela at 3000 feet. The HT ♂ is now in the NHMUK along with a PT ♀ (Figs. 87–90).

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